

**PCT**

NOTIFICATION OF TRANSMITTAL  
OF COPIES OF TRANSLATION  
OF THE INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY  
(CHAPTER I OR CHAPTER II  
OF THE PATENT COOPERATION TREATY)  
(PCT Rules 44bis.3(c) and 72.2)

To:

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Bearbeiter	
GS	Gr

Date of mailing (day/month/year) 09 November 2006 (09.11.2006)	
Applicant's or agent's file reference 040378WO	IMPORTANT NOTIFICATION
International application No. PCT/EP2005/003398	International filing date (day/month/year) 31 March 2005 (31.03.2005)
Applicant HYDRO ALUMINIUM DEUTSCHLAND GMBH et al	

## 1. Transmittal of the translation to the applicant.



The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter I).



The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter II).

## 2. Transmittal of the copy of the translation to the designated or elected Offices.

The International Bureau notifies the applicant that copies of that translation have been transmitted to the following designated or elected Offices requiring such translation:

None

The following designated or elected Offices, having waived the requirement for such a transmittal at this time, will receive copies of that translation from the International Bureau only upon their request:

AE, AG, AL, AM, AP, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EA, EC, EE, EG, EP, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OA, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

## 3. Reminder regarding translation into (one of) the official language(s) of the elected Office(s).

The applicant is reminded that, where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability (Chapter II).

It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned within the applicable time limit (Rule 74.1). See Volume II of the PCT Applicant's Guide for further details.

The International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland

Authorized officer

Yolaine Cussac

## PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY  
(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference 040378WO	<b>FOR FURTHER ACTION</b>		See item 4 below
International application No. PCT/EP2005/003398	International filing date ( <i>day/month/year</i> ) 31 March 2005 (31.03.2005)	Priority date ( <i>day/month/year</i> ) 31 March 2004 (31.03.2004)	
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237			
Applicant HYDRO ALUMINIUM DEUTSCHLAND GMBH			

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 *bis*.1(a).

2. This REPORT consists of a total of 7 sheets, including this cover sheet.

In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:

- |                                     |              |   |
|-------------------------------------|--------------|---|
| <input checked="" type="checkbox"/> | Box No. I    | Basis of the report   |
| <input type="checkbox"/>            | Box No. II   | Priority  |
| <input type="checkbox"/>            | Box No. III  | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability  |
| <input type="checkbox"/>            | Box No. IV   | Lack of unity of invention  |
| <input checked="" type="checkbox"/> | Box No. V    | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/>            | Box No. VI   | Certain documents cited   |
| <input type="checkbox"/>            | Box No. VII  | Certain defects in the international application  |
| <input type="checkbox"/>            | Box No. VIII | Certain observations on the international application   |

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. +41 22 338 82 70	Date of issuance of this report 01 November 2006 (01.11.2006)
	Authorized officer  Yolaine Cussac e-mail: pt11@wipo.int

# PATENT COOPERATION TREATY

TRANSLATION

From the  
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing (day/month/year) **See form PCT/ISA/210**

Applicant's or agent's file reference

**040378WO**

**FOR FURTHER ACTION**

See paragraph 2 below

International application No.

**PCT/EP2005/003398**

International filing date (day/month/year)

**31.03.2005**

Priority date (day/month/year)

**31.03.2004**

International Patent Classification (IPC) or both national classification and IPC

**C22C21/00, C22F1/04**

Applicant

**HYDRO ALUMINIUM DEUTSCHLAND GMBH**

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/EP

Authorized officer

Facsimile No.

Telephone No.

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

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Box No. I      Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.  
☐ This opinion has been established on the basis of a translation from the original language into the following language  
\_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material  
☐ a sequence listing  
☐ table(s) related to the sequence listing
  - b. format of material  
☐ in written format  
☐ in computer readable form
  - c. time of filing/furnishing  
☐ contained in the international application as filed.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE  
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Box No. V	Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
<b>1. Statement</b>			
Novelty (N)	Claims	4-11	YES
	Claims	1-3, 12-14	NO
Inventive step (IS)	Claims	4-11	YES
	Claims	1-3, 12-14	NO
Industrial applicability (IA)	Claims	1-14	YES
	Claims		NO
<b>2. Citations and explanations:</b>			
<p>Reference is made to the following documents:</p> <p>D1: EP-A-0 718 072</p> <p>D2: US-B1-6 391 129</p> <p>D3: EP-A-1 059 362</p> <p>D4: PATENT ABSTRACTS OF JAPAN vol. 1996, no. 02, 29 February 1996 &amp; JP 07 286250 A</p> <p>D5: PATENT ABSTRACTS OF JAPAN vol. 017, no. 052 (C-1022), 2 February 1993 &amp; JP 04 263033 A</p> <p>D6: PATENT ABSTRACTS OF JAPAN vol. 016, no. 544 (C-1004), 30 November 1992 &amp; JP 04 202735 A</p> <p>D7: PATENT ABSTRACTS OF JAPAN vol. 014, no. 356 (C-0745), 2 August 1990 &amp; JP 02 129333 A</p> <p><b>1. Product claim 1</b></p> <p><b>1.1.</b> Document D1 discloses alloys of compositions which, apart from the Cr content, are entirely within the claimed ranges (D1, table 1, page 6, alloys C2, C4, C6 and C8). Since the lower limit of the claimed Cr content is so low that it overlaps with the customary content of impurities, the disclosed alloys C2, C4, C6 and C8 are regarded as prejudicial to novelty (PCT Article 33(2)) (with respect to impurities, see for example D2, column 5, lines 35-41).</p>			

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Box No. V

Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

If novelty existed on the basis of the alloys C2, C4, C6 and C8 that are known from D1 because of the Cr content, an inventive step would not be acknowledged because no technical effect is associated with the lower range of the claimed Cr content (PCT Article 33(3)).

It is also noted that D1 discloses a Cr content of up to 0.35% by weight, in order to achieve an increase in the strength after soldering (D1, page 4, lines 35-36). The subject matter of claim 1 would therefore also have to be regarded as not inventive (PCT Article 33(3)) for this reason, that is on the basis of D1.

- 1.2. Like D1, D2-D5 also disclose alloys of compositions which, apart from the Cr content, are entirely within the claimed ranges (D2, table 1, column 9, alloys 1, 3-4; column 5, lines 23-41; claims) (D3, table 1, page 7, alloys 1, 3-4; page 5, lines 16-25; claims) (D4, table 1, alloy C, page 5) (D5, table 1, alloy 2, page 3).

Therefore, the objections raised above also apply on the basis of D2-D5 (PCT Article 33(2)-(3)).

- 1.3. D6 discloses an alloy (alloy C, table 1, page 4) of a composition which is entirely within the claimed ranges. The B content of the alloy C from D6 corresponds to the impurity content for B that is customary for such aluminium alloys.

The subject matter of claim 1 is therefore not novel (PCT Article 33(2)) over D6.

- 1.4. In a similar way, D7 discloses an alloy (alloy 6, table 1, page 5) of a composition which is entirely within the claimed ranges. The Zr content of the alloy 6 from D7 corresponds to the impurity content for Zr that is

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Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

customary for such aluminium alloys (see for example D2, column 5, lines 36-41 and D3, page 5, lines 24-25).

The subject matter of claim 1 is therefore not novel (PCT Article 33(2)) over D7.

2. Product claim 12

Claim 12 is directed at a product that is characterized by its production process (so-called "product-by-process claim"). However, such claims are only admissible if the products as such meet the prerequisites for patentability, i.e. that they are *inter alia* novel and inventive. In the present case, the method does not lead to any additional features that would make the product novel, in particular not in the light of the disclosures discussed above of documents D1-D7 (PCT Article 33(2)).

3. Method claim 4

The parameters of the method specified in claim 4 - in particular the temperatures and thickness during the rolling of an extruded strip or sheet - are not known or obvious (PCT Article 33(2)) from D1, which can be considered to be the closest prior art.

The problem addressed can therefore be considered that of how to provide a product which has improved heat resistance after soldering (see in the description, page 9, lines 9-18).

Since none of the available documents discloses or suggests the distinguishing features, an inventive step is acknowledged (PCT Article 33(3)).

4. Dependent claims 2-3, 5-11, 13-14

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Box No. V

Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

4.1. Dependent claims 2-3, 13-14 do not contain any features which, in combination with the features of any claim to which they refer, meet the PCT requirements for novelty and inventive step. The reasons are as follows:

- the additional features of claims 2-3, 13-14 are known from at least one of documents D1-D7 (PCT Article 33(2)).

It is noted that the lower limit of the claimed Ti content that is defined in claim 2 is so low that it overlaps with the customary content of impurities.

It is also noted that the alloys known from D1-D7 are used for heat exchangers, in particular for the automobile industry.

4.2. Dependent claims 5-11 refer to claim 4 and are therefore also to be regarded as novel and inventive.